HEXAGON

Brochure

Total materials and subcontract management for plants and projects

Intergraph Smart® Materials

Intergraph Smart® Materials is an integrated lifecycle material and supply chain subcontracting management solution that provides a collaboration platform/project workbench for partners in any engineering, procurement and construction (EPC) project supply chain.

Smart Materials helps lower project costs, compress schedules, improve risk management and enable companies to act globally to maintain advantage in a complex, international competitive market. From initial cost estimation through supply chain to onsite management, Smart Materials handles standardization, bills of materials (BOM) and requisitions, procurement functions, fabrication tracking and site functions, such as warehousing and disposition

The only complete, materials management and subcontracting solution, Smart Materials uses the latest information technology to provide users with a high degree of flexibility, scalability and easy integration into existing systems and workflows. Each department or function can simply access whatever materials data is needed for a specific material-related task, in the format most appropriate to that task.

We are using Smart Materials as company standard. In the Toyo group, we use it for all projects. It has been contributing greatly to the standardization."

Toshio Hayashi
Principle Engineering IT Advisor, Toyo Engineering

Responding to business drivers

Modular and open, Smart Materials responds to owner operator and EPC business drivers by:

- Lowering total project and installed costs by reducing labor hours, materials surpluses and shortages
- Reducing plant schedule through integration with design and cost systems
- Increasing competitiveness through minimized project bidding time, shorter schedule and reduced labor hours
- Reduces procurement costs by onboarding suppliers and online bidding capabilities
- Improving risk management through better overall project performance, project cash flow management and true management by exception
- Enabling global project work sharing and execution, using correct, complete and consistent data
- Enabling data reuse throughout the plant lifecycle, including operations, maintenance, and refurbishment
- Managing subcontracts via a portal from the planning phase to tracking each progress step of a subcontract

Bill of materials and requisitions

This solution supports a BOM for bulk or itemized materials from estimate and basic (front-end) design, through detailed design, to the as-built plant. BOMs are typically loaded from engineering systems (2D or 3D) and then verified in Smart Materials for completeness. To prepare for and simplify purchasing, BOMs are grouped into requisitions by a rule-driven process. Documents and vendor data can be attached before approval and releasing the Requisition to Procurement.

Supplier management and purchasing

Smart Materials offers a supplier management solution, an integral part of the Procurement Module. Users can access historical information on supplier performance, define and assign criteria for selecting suppliers based on qualifications and past performance. Users can register and maintain information via the Smart Materials Portal.

Utilize Materials to track account codes or control accounts to the material line-item level, enabling users to capture and report procurement activities performed at this level.

Materials enables effective management and storage throughout the inquiry and procurement. Reduce inquiry time by giving suppliers secure online access through Smart Materials Portal.

Expediting, inspection and logistics

Continual data reuse between departments ensures data is reliably maintained as subsequent revisions are issued. Seamless handover from expediting via inspection and logistics creates integrity and the most current data. Suppliers can submit packing information online; freight forwarders will provide information related to transportation and logistics.

Inventory and warehouse management

Data created during Smart Materials Expediting simplifies the materials receiving process, whether on job sites or in warehouses. Material site data collection can be automated for site receiving, inventory reconciliation, material issuing, and more. Users can easily create over, short, and damage (OSD) reports. Reviewing materials issued to sub-contractors, based on drawings or work packages, saves time and money.

Construction planning

Smart Materials' forecasting engine optimizes construction material planning by reliably predicting material availability against work package demand at any time during the procurement cycle and at any point in the supply chain. This reduces schedule risk and enables contractors to optimize their work plans, maximize productivity, and increase competitiveness.

Subcontract management

Subcontracting functionality is completely embedded into Smart Materials. It covers planning, a Smart Materials portal, Request for Quotation (RFQ) to award, and all post-agreement activities, as well as progress control for each subcontract. This subcontract strategy provides seamless requisitions and inquiry, with the solution providing all subcontracting features. All subcontracts are managed in a single place which integrates teams across the lifecycle.

Jovix®

Time and money are essential components of any construction project. Material availability impacts both time and money and the two primary issues are:

- knowing where materials are in the inventory or when the materials will arrive either on the jobsite or in inventory.
- finding materials in the warehouse without delay to avoid re-procurement.

Jovix helps you to:

- digitize and automate the manual, paper-based data collection in your supply chain.
- provide real-time visibility of your supply chain using a combination of mobile devices, RFID tags, barcode labels and geo-tracking.

The SMAT Connector for Jovix allows Smart Materials users to use the Jovix application for material inventory management at a site and perform supplier activities such as staging and packing the material.

Expediter transfers Purchase Order/ Release Note to Jovix, where the supplier can associate RFID tags, apply barcodes, split lines to match the physical nature of items, and assign items to packages and containers for streamlined logistics management and efficient receipt at site. Upon delivery, materials are received through Jovix and the Jovix MRR is transferred to Smart Materials to update site inventory. When issuing materials, Material Issue Reports are approved and transferred to Jovix as Pick Lists, which are used by the materials team to find, pick, and physically issue materials to construction. Completed Pick Lists from Jovix are transferred back to Smart Materials to post the MIR transaction and complete the material issuing cycle.

HEXAGON

Hexagon is a global leader in digital reality solutions, combining sensor, software and autonomous technologies. We are putting data to work to boost efficiency, productivity, quality and safety across industrial, manufacturing, infrastructure, public sector, and mobility applications.

Our technologies are shaping production and people-related ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Asset Lifecycle Intelligence division helps clients design, construct, and operate more profitable, safe, and sustainable industrial facilities. We empower customers to unlock data, accelerate industrial project modernization and digital maturity, increase productivity, and move the sustainability needle.

Our technologies help produce actionable insights that enable better decision-making and intelligence across the asset lifecycle of industrial projects, leading to improvements in safety, quality, efficiency, and productivity, which contribute to Economic and Environmental Sustainability.

Hexagon (Nasdaq Stockholm: HEXA B) has approximately 24,000 employees in 50 countries and net sales of approximately 5.5bn USD. Learn more at hexagon.com and follow us @HexagonAB.